

President of the Royal Society on the previous evening at Burlington House, and they will be entertained at dinner by the Society on the evening of the 14th at the Hôtel Métropole. On the 15th the delegates will be received by the Lord Mayor at the Mansion House, and on the afternoon of the 16th they will be entertained by Dr. Ludwig Mond, F.R.S., at a garden party at his house in Avenue Road. The total number of delegates appointed to attend the Conference amounts to forty, including representatives of the principal colonies of the Empire and the principal Governments of the world.

The following is a list of the delegates appointed to attend the Conference.

AUSTRIA.—Prof. Dr. Edmund Weiss; Prof. Dr. Ernst Mach.

BELGIUM.—Chevalier Descamps-David (President Institut International de Bibliographie); M. de Wulf (Member Institut International de Bibliographie); M. Paul Otlet (Member Institut International de Bibliographie).

BRAZIL.—Dr. João Ribeiro (Professor "Gymnasio Nacional").

DENMARK.—Prof. Christiansen (Universitet, Copenhagen).

FRANCE.—Prof. A. Milne-Edwards (Membre de l'Institut, &c.); Prof. G. Darboux (Membre de l'Institut, &c.); Prof. Troost (Membre de l'Institut, &c.); Dr. J. Deniker (Librarian, Muséum d'Histoire Naturelle, Paris).

GERMANY.—(Names not yet received).

GREECE.—M. Avierinos M. Averoff (Greek Consul at Edinburgh).

HUNGARY.—Prof. August Heller (Librarian, Ungarische Akademie, Buda-Pesth); Dr. Theodore Duka (London).

ITALY.—General Annibale Ferrero (Italian Ambassador in London).

JAPAN.—Hantaro Nagaoka (Assistant Professor, Science College, Tōkiō); Gakutaro Ozawa (Assistant Professor, Medical College, Tōkiō).

MEXICO.—Señor Don Francisco del Paso y Ironcoso.

NETHERLANDS.—Prof. D. J. Korteweg (Universiteit, Amsterdam).

NORWAY.—(Names not yet received).

PORTUGAL.—The Portuguese Minister in London (Señhor D'Antas).

RUSSIA.—Privy Councillor Stasow (First Librarian, Imper. PUBLICNAJA Biblioteka, St. Petersburg).

SWEDEN.—Dr. E. W. Dahlgren (Librarian, Kongl. Svenska Vetenskaps Akademien, Stockholm).

SWITZERLAND.—The Swiss Minister in London (M. Bourcart); Prof. Dr. F. A. Forel (Président du Comité Central de la Société Helvétique des Sciences Naturelles).

UNITED KINGDOM.—Representing the Government: Right Hon. Sir John E. Gorst, M.P. (Vice-President of the Committee of Council on Education). Representing the Royal Society of London: Prof. Michael Foster, Sec. R.S., Prof. H. E. Armstrong, F.R.S., Mr. J. Norman Lockyer, C.B., F.R.S., Dr. Ludwig Mond, F.R.S., Prof. A. W. Rücker, F.R.S.

UNITED STATES.—Dr. John S. Billings (U.S. Army); Prof. Simon Newcomb, For. Mem. R.S. (U.S. Nautical Almanac Office).

CANADA.—The High Commissioner for Canada (the Hon. Sir Donald A. Smith, G.C.M.G.).

CAPE COLONY.—Mr. Roland Trimen, F.R.S.

INDIA.—General Sir Richard Strachey, F.R.S.

NATAL.—The Agent-General for Natal (Walter Peace, C.M.G.).

NEW SOUTH WALES.—(Appointment awaiting confirmation).

NEW ZEALAND.—The Agent-General for New Zealand (the Hon. W. P. Reeves).

QUEENSLAND.—The Agent-General for Queensland.

NOTES.

WE are asked to state that a zoologist with experience of deep-sea dredging is required for the Belgian Antarctic expedition. Intending applicants should communicate with Lieut. de Gerlache, Commander of the expedition, at Sandefjord, Norway.

PROF. DR. G. NEUMAYER, the Director of the Deutsche Seewarte, reached his seventieth birthday on Sunday last. We join with German scientific papers in congratulating Prof. Neumayer upon his numerous contributions to natural knowledge, and in the hope that science may have the benefit of his assistance for many years to come.

DR. D. GILL, F.R.S., has been elected a Correspondant of the Paris Academy of Sciences.

WE regret to announce that Sir Joseph Prestwich died on Tuesday morning, after a short illness. By his death science has lost a devoted student, whose numerous papers in the various departments of theoretical, observational, and practical geology testify to a career of earnest and careful work. He was born in 1812, and became a Fellow of the Royal Society in 1853.

MR. J. H. MAIDEN has been appointed Government Botanist and Director of the Botanic Gardens at Sydney, in succession to Mr. Charles Moore, who has recently retired after a service, in these capacities, of nearly half a century.

MAJOR ARTHUR GRIFFITHS, one of her Majesty's Inspectors of Prisons, has been appointed by the Home Secretary to represent her Majesty's Government at the International Congress of Criminal Anthropology to be held at Geneva in August next.

WITH reference to the tornado at St. Louis on May 27, we learn from *Science* that, with commendable promptness, the Washington Weather Bureau issued, on May 29, a special storm-bulletin showing the weather conditions over the United States on May 26-28. The Chicago 8h. a.m. forecast on May 27 predicted severe thunderstorms for Illinois and adjoining States during the latter part of the day, and a special warning was issued from Washington at 10h. 10m. on that morning.

THE Northern Province of Japan has recently been visited by a series of destructive earthquakes. Within twenty hours, on the 15th and 16th insts., no less than 150 shocks were felt. Nearly the whole of the town of Kamaishi has been destroyed, with the reported loss of one thousand lives. Three of the shocks appear to have been of exceptional severity, for, according to information we have received from Prof. Vicentini, they were registered by his microseismograph at Padua. The first pulsations began there at 10h. 45m. a.m. (Greenwich mean time) on the 15th, and lasted till 0h. 10m. p.m.; the second continued from 7h. 28m. to 8h. 30m. p.m.; the third and strongest began at 11h. 14m. p.m., and ended at 0h. 2m. a.m. on the 16th inst. The great sea-wave, which accompanied the earthquake, extended over seventy miles of the north-east coast of Japan, destroying many towns, and drowning, it is feared, about ten thousand persons.

A DEVOTED student of natural history, whose name is known to most zoologists, and whose observations have greatly enriched ornithology, has just passed away in the person of Lord Lilford. Numerous notes by him on British birds, and on the ornithology of Spain and of the shores of the Mediterranean, have appeared in the *Zoologist* and the *Ibis*, the journal of the British Ornithologists' Union, of which he was President. Last year he published an excellent volume on the birds of his native county, Northamptonshire, with beautiful illustrations, and the thirty-second part of his "Coloured Figures of the Birds of the British Islands," which was issued only in April last, almost

completes that work. Lord Lilford will be remembered and regretted by naturalists all over the world.

M. TONY NOËL has (says the *British Medical Journal*) just finished a statue of Pasteur, to be placed in the market-place of Alais, where the illustrious investigator made his researches in the diseases of silkworms. The statue is declared by the relatives and friends of M. Pasteur to be an excellent likeness, and artistically it is a very successful piece of work. Pasteur is represented erect, gazing fixedly at a sprig of mulberry covered with cocoons which he holds in his left hand. At his feet is a young girl in a graceful attitude handing him other cocoons. Near at hand are a microscope and a box of scientific instruments. M. Berthelot, who in company with M. Roux carefully inspected the statue, is said to have exclaimed: "Je revois Pasteur tel qu'il était il-y-a vingt-cinq ans."

WE regret to announce the death, on the 14th inst., of Dr. H. B. Pollard, lecturer on biology and comparative anatomy at Charing Cross Hospital. Elected a scholar of Christ Church, Oxford, in 1885, Dr. Pollard graduated B.M. with first class honours in morphology in 1890, and concurrently gained similar distinction in the London intermediate and final B.Sc. examinations. He subsequently studied for two years under Prof. Wiedersheim at Freiburg, and in 1892 was appointed to the Oxford table at Dr. Döhrn's laboratory at Naples. In 1893 he was elected Berkeley Fellow of the Owens College, Manchester, and in 1895 lecturer at Charing Cross Hospital. He was granted the degree of D.Sc. by London University for a thesis on *Polypterus*. Dr. Pollard made a special study of fish, and in a series of papers contributed to German scientific periodicals, he originated a theory of their development which has received considerable attention from biologists. He was writing a textbook on the subject at the time of his death, which took place at Dover, in his twenty-eighth year. He was apparently stunned by a fall while bathing and drowned.

FOR the opening of museums and art galleries on Sundays we are undoubtedly very largely indebted to the zeal of Mr. Mark Judge, the Honorary Secretary of the Sunday Society. For some years the Society cried aloud in the wilderness, but few of the multitude paid heed, though such men as Darwin, Huxley, Romanes, Spottiswoode and Tyndall, only to mention a few of the supporters who are gone, became apostles of the movement. From the time when the Society was founded, thirty years ago, Mr. Judge has advanced its objects with the pertinacity which comes from conviction, and has thus educated public opinion on the subject of Sunday reform. The objects have now been attained, and there is a feeling that the services rendered by Mr. Judge in support of them should be publicly recognised. A Committee has therefore been formed to appeal, for subscriptions for a testimonial to Mr. Judge. It is hoped that a ready response will be made to the appeal, as a token of gratitude for the boon of Sunday opening. The Chairman of the Testimonial Committee is the Rev. S. A. Barnett, and the Hon. Sec. and Treasurer, Prof. Corfield, to whom subscriptions may be sent at 19 Savile Row, W.

WE learn from *Science* that the party from Cornell University which will embark with Lieut. Peary on the *Kite* is as follows. R. S. Tarr, professor of dynamic geology and physical geography; A. C. Gill, professor of mineralogy and petrography; J. A. Bonstell, assistant in geology; T. L. Watson, fellow in geology; E. M. Kindle, scholar in palaeontology; and J. O. Martin, special student in entomology. It is the purpose of the party to make as thorough a geological study as is possible in five or six weeks, of the region near the Devil's Thumb, at the south end of Melville Bay, and in addition to this to make collections of flora and fauna. Another party will also sail

with Lieutenant Peary, under the leadership of A. E. Burton, professor of civil engineering in the Massachusetts Institute of Technology. This party will land at the great Umanak Fiord; they will make pendulum observations, natural history collections, and study the glacial phenomena. Lieut. Peary himself will proceed north as far as Cape Sabine at the entrance of Smith Sound. He will also endeavour to explore Jones Sound. He will be accompanied by Mr. Albert Operti, the artist, who will take casts of the Cape York natives for the purpose of making models for the American Museum of Natural History, New York.

IN connection with the note in *NATURE* of June 18 (p. 158), with reference to the instruction in meteorology in the University of Odessa, our attention has been drawn to a circular relating to meteorological observations in schools, recently prepared for the Connecticut State Board of Education by Mr. R. De C. Ward, Instructor in Meteorology in Harvard University, and published by the Connecticut Board. The *Document* (No. 10, 1896) points out that the time has come when meteorology should be systematically taught in schools, and it indicates the lines along which the elementary study of the subject should proceed in order to be most thorough and useful. In addition to the registration of observations without the use of instruments, including current weather and the state of the sky, it is not proposed to attempt anything more than records of temperature, direction and force of wind, and rainfall during the early years of the grammar-school course. Such elementary work cannot fail to attract both teachers and scholars, and to lay a foundation on which, in after years, a more advanced study of meteorology (including the practical use of daily weather maps) may be built up.

THE Hawke's Bay Philosophical Institute, New Zealand, is fortunate in having such a generous and broad-minded friend as the Rev. William Colenso, F.R.S., as their President. At the opening of the Institute's session in May, after delivering an animated address, Mr. Colenso put before the meeting a scheme for the foundation of a museum to take the place of the present museum at Napier. He offered to give towards the realisation of his scheme the sum of £1000 and a freehold site, and to supplement this with a second donation of £500 so soon as £500 was given by some one else. The total amount required to establish the museum is about £4000. Referring to the conditions of gift, Mr. Colenso said: "The museum must be a building which will be open every day of the week and Sunday afternoons too. I find that this is the case in Auckland, where large numbers visit the museum on Sunday afternoons. And what better use can a man give to his time than in the observance of the wonderful works of his Maker? There is another proviso, and that is that the building must only be used for the purposes of a museum and library. There must be no concerts, no Liedertafels, no spouting, no mutual admiration societies, no globe-trotters, no tourists, and no parsons. I will not give a penny for persons of that kind. I have received a letter asking for assistance for a museum in my native town in England. There the money has to be raised by a certain time. So in Napier it must be raised by December 31. The deed would be vested in five trustees, who should be generous and businesslike men, with a keen interest in the project. The museum proposed would be a museum for the East Coast, not only for Hawke's Bay proper, or for the old provincial district, but for Poverty Bay and Gisborne and the country stretching up to the East Cape." There should be no difficulty in raising the money required for the consummation of the scheme which Mr. Colenso has in mind, and towards which he is willing to contribute so liberally.

DR. BRUNI, of Naples, has recently contributed an important paper to the *Annales de l'Institut Pasteur*, corroborating earlier investigations on the association of the typhoid bacillus with cases of osteomyelitis. The bacteriological study of this disease has recently been actively pursued, and a French physician not long ago published statistics of ninety cases in which he found the *Staphylococcus aureus* seventy times, and the typhoid bacillus four times. Particular interest attaches to the connection of Eberth's bacillus with osteomyelitis, since Orloff, Fränkel, and others have shown that this organism is frequently found in osseous tissue, whilst of especial importance is the discovery made by Chantemesse and Widal, that it has a particular predilection for the marrow of bones. Osteomyelitis may declare itself not only during the course of typhoid fever, or during the period of convalescence, but also a long time after the recovery has been completed. That a connection was possible between typhoid fever and subsequent manifestations of osteomyelitis was first indicated by Keen in 1878; but for the more precise information which is now at our disposal on this subject, we are indebted to Chantemesse and Widal. Dr. Bruni describes a most interesting case of osteomyelitis in which the typhoid bacillus was found in the marrow of the left tibia, six years after the patient had recovered from an acute attack of typhoid fever. Most careful tests were made, including Pfeiffer's ingenious serum reaction, to correctly diagnose the bacillus found as that of typhoid, and there appears to be no doubt that Dr. Bruni has furnished fresh evidence of the new rôle which may be assumed by this much-dreaded microbe.

DURING last year M. Flammarion made some interesting experiments as to the effect of lights of different colours upon vegetable growth (*Bull. Soc. Ast. France*, June). On July 4, eight identical sensitive plants, which had been sown at the same time, were selected for experiment. These were placed two by two in similarly constructed glass boxes, of which the sides were of different colours, one being red, one green, one blue, and another of ordinary clear glass. All were exposed to precisely the same meteorological conditions throughout. The rates of growth were as follows:

	Red. m.	Green. m.	Blue. m.	White. m.
Sept. 6	0'220	0'090	0'027	0'045
„ 27	0.345	0'150	0'027	0.080
Oct. 22	0'420	0'152	0'027	0'100

Thus, while the plants exposed to blue light made no progress whatever, those exposed to red increased their height fifteen times. The latter, moreover, acquired an extraordinary degree of sensitiveness. Similar results, but not so strongly marked, were obtained with geraniums and other plants. The fact that the plants exposed to white light grew less rapidly than those which were under red glass, although receiving the same amount of red radiations, seems to suggest that the presence of blue light in the former case not only did not accelerate the growth of the plants, but actually retarded it.

IN vol. viii. of the *Proc. Roy. Soc. Victoria* (Melbourne), recently published, Mr. R. Etheridge, jun., describes some Trilobite remains from Heathcote, on the western side of Mount Ida, which are of extreme interest as an addition to the scanty Cambrian fauna of the Antipodes. Although occurring only as casts, the characters of the head and pygidium appear to be clearly shown, so much so that Mr. C. D. Walcott, from an examination of careful drawings, unhesitatingly referred them to the Middle Cambrian. As the result of a critical comparison, Mr. Etheridge is unable to identify them with any known genus, and has named the specimens *Dinesus ida*. Along with this trilobite occurs a brachiopod, which seems very similar to *Lakhtina*, a form described from the Cambrian of the Salt

Range, India. It is to be hoped that this scanty fauna, which is the only unquestionable Middle Cambrian fauna yet found in Australia, and which seems to have no close relation to any of the other Cambrian faunas of that country, may soon be added to, for it is certain that the trilobites are a most promising group for the determination of the geographical life-provinces which may have existed in these remote times. In the same volume there is a revision of (with additions to) the fauna of the Table Cape Beds, Tasmania, by Mr. Pritchard, who regards it as Eocene.

THE *Agricultural Gazette* of Cape Colony publishes a letter sent by Sir Ferdinand von Mueller to Sir Hercules Robinson, the Governor of the Colony, and appealing for a reserve-ground for the preservation of rare Cape plants. As the veteran botanist of Victoria points out, the vegetation of South Africa is the richest in the world, not only as to number of species, but also as containing an astounding variety of plants of special and peculiar type, aggregated chiefly in the south-western provinces and occurring nowhere else. Hundreds of these are quite local and restricted to very circumscribed areas. They are sure to be swept out of existence altogether, unless special provision is made for their preservation; and it is on that account that the appeal is made for a wild-garden or reserve for the conservation of Cape plants in areas where they can be maintained for the knowledge of generations to come. It may be said that botanic gardens exist already in several parts of the colony; but in a report upon Baron von Mueller's proposal, Prof. Mac Owan remarks: "These places can only exist by making themselves into a lounge or pleasaunce of idle hours for the population living close by. I speak as one who knows, for it was my lot to run one of these for fourteen of the hardest and most unsatisfactory years of my working life. The conditions of support compelled the place to grovel down into a nursery-garden on commercial lines, in order to get money enough to keep it presentable for the daily stroller. Nor did I ever dare to plant up any single portion of it with typical representatives of our Flora. The public would have taken the alarm at once. They care nothing for the special prehistoric flora of the land they live in, compared with the newest hideous abortion in chrysanthemums. . . . So that some of the gardens which we complaisantly call botanic, have it in them to stand between the living and the dead, and stop the slow and sure extinction of the most ancient and interesting part of our Cape Flora. This state of things, brought home to me yearly as I traverse the same solitudes each season, and note the increasing scarcity of rare plants, has been much in mind; but I do not see any other way of dealing with the matter, than by the reserve, now recommended, of chosen localities for all time and inalienable." But much as this is to be desired, Prof. Mac Owan has to confess that the idea is not likely of even approximate fulfilment.

UNDER the editorship of Dr. Götz Martius, Professor of Philosophy in the University of Bonn, the first part of a new journal has appeared, entitled *Beiträge zur Psychologie und Philosophie*. The present number is devoted to considerations bearing on colour-vision, and contains three papers by Dr. Martius on the brightness of negative after-images, on a new method of determining the brightness of colours, and on the conception of specific brightness of colour-sensation. In addition to these, Herr Friedrich Kretzmann contributes a note on the brightness of complementary mixtures.

IN *L'Elletricista*, Prof. A. Róiti describes a new tube for the production of Röntgen rays, in which the bottom end is covered with a cap of aluminium instead of glass, thus allowing freer passage of these rays. According to the figure given, it appears that this cap is used as the anode, the kathode being a concave speculum of aluminium facing it. By polishing with emery

the end of the tube over which the cap fits, the whole is made perfectly air-tight so that good vacua can be obtained. For taking photographs of bones, &c., none of the other tubes that the author had constructed or purchased approached anywhere near the present one in respect of intensity and sharpness of definition.

In the *Journal of Physiology*, Dr. Lazarus Barlow has pointed out that before the laws of osmosis, deduced from the final osmotic pressure, freezing point, &c., can be applied to the explanation of biological problems, it is necessary to determine whether the initial rates of osmosis of substances bear constant ratios to their final osmotic pressures, and whether the presence of proteid substances in the solutions affects the initial rate of osmosis. The author has found that the initial rates of osmosis cannot be determined from observations of the freezing points of solutions, and that proteid substances, even when present only in minute quantities, markedly diminish the rate of osmosis. In a subsequent paper, Dr. Barlow applies these conclusions to the consideration of lymph-formation, and describes observations of the specific gravity of the blood, of voluntary muscle, and of lymph, which have an important bearing on the question. In his conclusion the author summarises the evidence in favour of the occurrence of osmosis and increased filtration as the effective factors in causing the increased outflow of lymph that is seen after the injection of a crystalloid into the blood, as well as the evidence against the view that osmosis and increased filtration alone account for the observed phenomena.

A VALUABLE little pamphlet on "Coal Mining," full of information on many questions of practical importance in the working and use of coal, has been received from Mr. W. Galloway. The pamphlet is an excerpt from the "Handbook of the Cardiff Exhibition," and may be obtained from the office of the *Western Mail*, Cardiff.

DURING the spring and summer, Herr P. Sintenis has been carrying out a botanical exploration of the mountains of the Peloponnesus. After visiting Volo in Thessaly, he proposes to investigate the almost unknown flora of the south-western portion of the Pindu Chain.

At the time of his death Mr. Seeböhm had almost completed an exhaustive monograph on the "Family of Thrushes." We learn that Dr. Bowdler Sharpe has undertaken to finish the work, and that it will shortly be published by Messrs. Henry Sotheran and Co. It will be illustrated with nearly 150 coloured plates, and the edition will be limited to 250 copies.

A SHORT account of the proceedings of the Sixth International Geographical Congress, held in London last July, appeared in these columns at the close of the Congress. The official Report, containing the addresses delivered and papers read before the Congress, together with a brief historical statement, has now been published. When it is remembered that the papers are in several languages, and that authors are often procrastinators in the matter of reading and returning proofs, the appearance of the Report within a year of the Congress is commendable. Most of the papers are of international interest, and all of them are of geographical value. The two Secretaries of the Congress, and Dr. Mill, who has done the editorial work in connection with the Report, are to be congratulated upon having brought their difficult tasks to a satisfactory conclusion.

THE second edition of the valuable "Statistical Atlas of India" has been published by the Government of India, and is obtainable from Mr. Edward Stanford. The Atlas originally appeared in 1886, but since then another census of India has

been taken, and new information has been obtained, so that a revision of the maps was necessary. The maps and diagrams in the Atlas give a good general idea of the character, inhabitants, and resources of India, and illustrate the commercial, financial, and educational condition of the country. Explanatory chapters are contributed by persons having special knowledge of the subjects of them; thus, Sir E. C. Buck writes on physical configuration, irrigation, famine, revenue and rent systems; Dr. W. King, on the geology of India; and Mr. J. Eliot, on the rainfall and climate. Mr. George Watt deals with crops and economic minerals; Mr. B. Ribbentrop with forests; Mr. J. E. O'Connor with prices, foreign trade, finance and taxation; and Veterinary-Lieutenant H. T. Pease with horses and live-stock. The Atlas is an excellent piece of work, which conveys by concise text and clear illustration, an abundance of information concerning our great Indian Empire.

THE additions to the Zoological Society's Gardens during the past week include a Vervet Monkey (*Cercopithecus lalandii*, ♂) from South Africa, presented by Mr. Vernon E. Barratt; a Black-eared Marmoset (*Hapale penicillata*) from South-east Brazil, presented by Mr. S. Osborn; two Golden Eagles (*Aquila chrysaetus*), two Peregrine Falcons (*Falco peregrinus*) from the Isle of Mull, presented by the MacLaine of Lochbuie; two Wood Owls (*Syrnium aluco*), a Short-eared Owl (*Asio brachyotus*), British, presented by Mr. A. Farquhar Wilson; a Ring-necked Parrakeet (*Palearnis torquatus*) from India, presented by Miss Smith; a Black-headed Cuckoo (*Corvus nanday*) from Paraguay, presented by Mrs. Baird; two Peafowls (*Pavo cristatus, albino*) from the Transvaal, presented by Mr. F. A. Noyce; a Mona Monkey (*Cercopithecus mona*), two West-African Love-Birds (*Agapornis pullaria*) from West Africa, a Crab-eating Raccoon (*Procyon cancrivorus*) from South America, deposited; an Australian Fruit Bat (*Pteropus poliocephalus*) from Australia, purchased; a Burriel Wild Sheep (*Ovis burriel*), a Thar (*Capra jemlaica*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

RETURN OF COMET BROOKS (1889 V.).—A telegram from Kiel announces that Brooks's periodic comet was observed by Javelle at Nice on June 20. At 14h. 17.4m. mean time it was in R.A. 22h. 25m. 30s., Decl. 18° 33' 59" S. The comet is now in the southern part of Aquarius, and rises about midnight. It is interesting to note that the observed place of the comet shows a very close agreement with Dr. Bauschinger's search ephemeris printed in NATURE (vol. liv. p. 84).

VISIBILITY OF SOLAR PROMINENCES.—Prof. Hale has brought together some facts which emphasise the importance of the work which may be done by observers of solar prominences at the time of a total solar eclipse without going to view the eclipse itself (*Astrophys. Jour.*, May). It is pointed out that in 1870 Tacchini concluded that the dimensions of prominences spectroscopically observed in full sunshine, and measured in H α light, were considerably smaller than those measured telescopically during an eclipse. In 1883 the same observer discovered the "white prominences," and found that these were not visible in the spectroscope immediately after the eclipse. Similar results were obtained in 1886, and it was further ascertained that the spectrum of a white prominence consisted principally of the H and K lines, the hydrogen lines being extremely feeble.

The results obtained during the eclipse of 1893 furnish valuable data as to the relative efficiency of the different methods of registering the forms of the prominences, as the spectroheliograph at Chicago was employed on that occasion, and a complete set of eye observations was secured by Fenyi at Kalocsa. A comparison is drawn between these non-eclipse observations and the forms of the prominences as photographed nearly at the same time by Prof. Schaeberle, in Chili, and by Mr. Fowler with the prismatic camera in A^cca. It turns out that one of